

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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In the Matter of:

Price Cap Performance Review
for Local Exchange Carriers

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CC Docket No. 94-1

FEDERAL COMMUNICATIONS COMMISSION
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**Reply Comments of the United States Telephone Association on Fourth
Further Notice of Proposed Rulemaking**

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SUMMARY

In these reply comments, USTA responds to the objections raised in the initial comments concerning the simplified Christensen TFP approach filed with USTA's initial comments. In fact, as explained below, the simplified Christensen TFP approach anticipated many of these objections, particularly those regarding the original Christensen study's use of proprietary data. The simplified method utilizes publicly available and verifiable data. USTA responds to the other issues raised regarding the Christensen TFP methodology, including issues regarding economic depreciation rates, input price adjustments, and the requirement that TFP be calculated on a total company basis. USTA also responds to other issues regarding the long-term price cap plan, including issues related to the calculation of the productivity offset as a moving average, the elimination of sharing obligations, the need for a separate common line formula, and the proper treatment of exogenous costs.

USTA stands by the simplified Christensen TFP methodology proposed in its initial comments; its reply comments comprise a point-by-point rebuttal of each of the criticisms of Christensen's methods for aggregating categories of output, measuring input, including the cost of capital, and Christensen's determination that no meaningful input price differential or interstate-only TFP can be developed. At the same time, USTA's reply comments urge the Commission to examine the initial comments in this record not from the myopic goal of simply lowering LEC access rates, but from the more accurate perspective of whether the proposals advocated make sense in light of the Commission's broader goals.

The FNPRM should not be viewed as simply another opportunity to lower LEC access charges with the blunt instrument of the productivity offset. Rather, the productivity offset should simply specify the extent to which LEC productivity gains should be reflected in rates. The productivity offset is not the proper tool for achieving price cap index reductions greater than those warranted by increased productivity. Moreover, the productivity offset should be set in a manner which recognizes that other elements of the long-term plan for regulating LECs' access charges must be addressed in light of growing competition, as contemplated by the Telecommunications Act of 1996, and by the Second Further Notice in this proceeding.

MCI, AT&T and Ad Hoc each argue that the productivity offset should be designed to limit LEC earnings to a point at or below currently prescribed levels. These proposals have one key element in common - they would completely eviscerate any and all profit incentives from the long-term price cap plan. The Commission has long recognized that price cap regulation is in fact intended to create profit incentives for greater efficiency - they are the same profit incentives that exist in competitive markets. There is no need for the productivity offset to serve any purpose other than that for which it was intended. The simplified Christensen TFP method represents such a meaningful productivity offset: an accurate measure of LEC productivity, yielding an appropriate offsetting adjustment to the increases warranted by inflation.

The simplified method is also administratively simple - all the data needed to calculate the TFP-based rolling average productivity offset can be displayed in a 19 page TFP Review Plan, such as that provided by USTA as Attachment B to its initial comments.

The simplified Christensen TFP method recognizes that there is no inherent meaningful differential between the rate of growth in input prices for LECs, and the rate of growth in input prices for the U.S. economy. Proper analysis of this differential reveals that the result is essentially zero. No party demonstrates that the long-term differential is anything other than zero. Additionally, the attached Christensen Reply demonstrates that examination of short-term data confirms that the differential is merely "random noise" - in the 1989-94 period the differential was in fact positive. The comments advocating an input price adjustment provide no meaningful analysis, and instead appear to argue, without support, that an input price adjustment should be included simply because it increases the productivity offset. To the extent that these parties calculate an input price adjustment, they do so using inconsistent data sets - the LEC input price index is adjusted in a manner not performed on the index for the U.S. economy. Such an approach is inconsistent with the goal of an economically meaningful productivity offset.

The simplified Christensen TFP method also recognizes that no meaningful productivity offset can be developed on an interstate-only basis, because interstate and intrastate services share common inputs. Any artificial allocation of inputs between jurisdiction would be arbitrary and not provide any accurate measure of productivity. The commenters advocating an interstate-only productivity offset essentially acknowledge that interstate-only productivity cannot be meaningfully measured. Instead, they rely on an unjustified assumption that total company input can be used as a proxy for interstate-only input. An interstate-only productivity offset is not legally required under Smith v. Illinois Bell, 282 U.S. 133 (1930). If Smith were read to require that result, neither the FCC nor a state Commission could utilize GNP-PI (or GDP-PI), nationwide measures of the cost of capital, or any other economy-wide figures in adjusting price cap indexes. This absurd result was never contemplated by Smith.

The simplified Christensen TFP method properly calculates the elements of TFP. Christensen properly uses economic depreciation rates, rather than the rates prescribed by regulation. MCI provided a study by MiCRA which advocates regulated depreciation rates. As discussed in the TFI Study included as Attachment D to these replies, the MiCRA paper is premised on assumptions concerning the economic lives of telephone plant that ignore the substantial changes that are transforming the telecommunications industry. Other telecommunications firms, such as cable operators and long-distance providers who will be competing head-to-head with telephone companies, utilize far shorter lives than those prescribed by regulators for virtually identical plant. It is more likely that MCI advocates continued use of regulated depreciation rates because inadequate depreciation resulted in artificially lower prices for interexchange carriers and other access customers.

The Christensen simplified TFP also properly calculates the labor and materials input indexes. The labor index need not be adjusted for cost savings through early retirements, for two reasons: 1) expenses associated with work force reduction programs are already “normalized” as suggested by Ad Hoc, as required under Responsible Accounting Order 24 (RAO 24). This requirement, in effect, normalizes the costs of force reduction programs undertaken by the LECs over future years; 2) early retirement incentives are legitimate costs of business which have been, and will continue to be, incurred by some LECs seeking to reduce future costs. To this extent, these costs should be included within the input time series and incorporated into the TFP study in the year in which the costs are incurred. The Christensen simplified TFP also properly utilizes GDP-PI as a meaningful proxy for LECs’ cost of materials. The materials price index advocated by AT&T does not meet the FCC’s criteria of accessibility and verifiability, since it is the result of a complex set of computations that are not documented. Additionally, AT&T’s materials index is based only on transactions between the telecommunications industry and firms outside the telecommunications industry. This shortcoming leads to biased estimates of the materials price index.

As explained in further detail in the attachments to USTA’s replies, AT&T’s “performance-based” TFP model is essentially a revised version of the AT&T historical revenue model, not a measure of TFP. In the performance-based model, AT&T examines the input-output relationship that results when an adjustment is made to input - when the price of capital is adjusted to make total expenditure equal total revenue. Neither the historical revenue method nor the “performance-based” method examine actual TFP. Since the AT&T model does not examine actual input, it cannot measure TFP. What the AT&T model does accomplish is to reimpose rate-of-return regulation, by using accounting returns in measuring the price of capital. This approach is inconsistent with the basis of incentive regulation.

The Commission requested comment on a number of “safeguards” associated with the long-term price cap plan: the sharing mechanism, the consumer productivity dividend or CPD, and periodic reviews. Where the productivity offset is calculated as a moving average, the simplified Christensen TFP method will adequately flow through productivity gains to consumers. Accordingly, there is no need for the Commission to adopt external safeguards to ensure that rates are just and reasonable. The Commission has recognized that sharing obligations blunt the incentives for greater efficiency which are at the core of a meaningful price cap plan. With a moving average TFP-offset, efficiency gains are regularly flowed through and the additional mechanism of sharing is superfluous. The Commission should eliminate sharing and the CPD from the long-term price cap plan. Additionally, no further review of the price cap plan needs to be scheduled at this time. A moving average TFP productivity offset will flow through productivity gains more quickly and more efficiently than periodic reviews.

The Commission correctly recognizes that an X-factor based on a separate common line formula unnecessary. AT&T asserts, with no proof, that the per-line formula is “essential to the proper functioning of the LEC price cap plan.” In fact, the proper functioning of the price cap

plan would be to avoid double counting of productivity growth. AT&T's approach, relying on TFP growth that already includes common line-related productivity, and making a separate duplicative adjustment, is improper. The TFP approach used by Christensen Associates includes all of the output growth associated with CCL minutes of use (MOU). To the extent that loop costs are not traffic sensitive and grow less rapidly than the CCL minutes, the measure of inputs in the Christensen Simplified TFP study also reflect this fact. Thus, the Christensen approach already fully captures any and all productivity growth, and no adjustments to the Christensen TFP results are warranted or appropriate.

All parties, save MCI, agree that no changes need to be made to the present rules regarding exogenous costs. As AT&T points out, sufficient safeguards exist within the present rules for all parties to have adequate input as to whether such changes are appropriate. MCI suggests that exogenous changes should be limited to jurisdictional changes required by the Commission. MCI's rationale is that non-regulated companies must determine how to meet these other kinds of changes without being able to change their prices and that price cap regulation should mirror this supposed effect of the competitive market. But changes in FCC regulatory fees, for example, are not the result of LEC business decisions, they are the result of FCC action. Competitive companies, not under regulation, have the freedom to make business decisions which avoid such cost increases, or to move their prices up and down in response to such factors. MCI's argument suggests that LECs should be regulated in a manner which requires them to respond to imposed regulatory changes as if they existed in a purely competitive, unregulated market where such changes are not imposed. There is no logical basis to adopt this absurd position.

The initial comments in this proceeding demonstrate that the simplified Christensen TFP method, calculated as a moving average, is the best method for calculating a productivity offset which meets the Commission's goals that the productivity offset be economically meaningful, administratively simple, and flow through productivity gains to consumers. Particularly with a moving average, there is no need for additional regulations such as sharing, productivity dividends, or periodic price cap reviews. The Commission should adopt the simplified Christensen TFP method as part of a meaningful long-term price cap plan.

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**Reply Comments of the United States Telephone Association on Fourth Further Notice of
Proposed Rulemaking**

INTRODUCTION

The United States Telephone Association (USTA) submits these reply comments in response to the Fourth Further Notice of Proposed Rulemaking issued in the above-referenced proceeding.¹ USTA is the principal trade association of the local exchange carrier (LEC) industry. USTA represents over 1100 LECs, with a wide variety of company sizes within its membership. USTA was an active participant in the Price Cap Performance Review proceeding completed in March 1995. In its initial comments, USTA filed an updated simplified version of the Christensen Total Factor Productivity (TFP) methodology, as well as a TFP Review Plan (TFPRP) to serve as a foundation for adopting a TFP approach for the long-term price cap plan.

In these reply comments, USTA responds to the objections raised in the initial comments concerning the Christensen TFP approach. In fact, as explained below, the simplified Christensen TFP approach filed by USTA with its initial comments already addresses many of these objections, particularly those regarding the original Christensen

¹LEC Price Cap Performance Review, Fourth Further Notice of Proposed Rulemaking, CC Docket No. 94-1, FCC 95-406, (released September 27, 1995) ("FNPRM").

study's use of proprietary data. USTA responds to the other issues raised regarding the Christensen TFP methodology, including issues regarding economic depreciation rates, input price adjustments, and the requirement that TFP be calculated on a total company basis. USTA also responds to other issues regarding the long-term price cap plan, including issues related to the calculation of the productivity offset as a moving average, the elimination of sharing obligations, the need for a separate common line formula, and the proper treatment of exogenous costs.

USTA includes four attachments to these reply comments: Attachment A is a reply from Christensen Associates ("Christensen Reply") discussing the objections to the simplified Christensen TFP method submitted with USTA's initial comments in this proceeding on January 16, 1996. Attachment B is a reply from National Economic Research Associates ("NERA Reply"), Attachment C is an affidavit from Dr. James Vander Weide ("Vander Weide Reply"), and Attachment D is a discussion of depreciation issues prepared by Technology Futures, Inc. ("TFI Reply").

USTA stands by the simplified Christensen TFP methodology proposed in its initial comments; its reply comments comprise a point-by-point rebuttal of each of the criticisms of Christensen's methods for aggregating categories of output, measuring input, including the cost of capital, and Christensen's determination that no meaningful input price differential or interstate-only TFP can be developed. At the same time, USTA's reply comments urge the Commission to examine the initial comments in this record not from the myopic goal of simply lowering LEC access rates, but from the more accurate perspective of whether the proposals advocated make sense in light of the Commission's broader goals.

The FNPRM begins with the premise that productivity offset element of the long-term price cap plan must be economically meaningful, administratively simple, and should flow-through the benefits of productivity gains to consumers, while preserving the profit incentives which foster such further productivity gains. See FNPRM, para. 16. Nonetheless, some

commenters suggest that the determination of the proper level of the productivity should be based on other factors. See, e.g., Comments of Ad Hoc Telecommunications Users Committee (“Ad Hoc”) at 8 (X-factor should be used to limit LEC earnings); Comments of MCI at 13 (X-factor should drive rates down to economic costs)

The FNPRM should not be viewed as simply another opportunity to lower LEC access charges with the blunt instrument of the productivity offset. While such action may be an opportunity for long-distance carriers who fail to flow-through access charge reductions to reap a windfall, such action does not necessarily translate into greater competition or other consumer benefit². Rather, the productivity offset should simply specify the extent to which LEC productivity gains should be reflected in rates. The productivity offset is not the proper tool for achieving price cap index reductions greater than those warranted by increased productivity.

The productivity factor for the long-term price cap plan must be considered as an integral part of a coherent, comprehensive plan for transitioning to an even more competitive market - for which regulations must be implemented to both encourage this transition and recognize its consequences. See Telecommunications Act of 1996, Report 104-458 (noting that Congress intends to provide for a “pro-competitive, de-regulatory national policy framework,” which opens all telecommunications markets to competition). As services become more competitive, they should be removed from price caps altogether. The Commission should strive to allow a more competitive marketplace to drive access prices. Extensive regulation of access prices is inconsistent with this goal.

²Similarly, there is no merit to the argument raised by some commenters, e.g., MCI Comments at 7, that the X-factor should be raised in the long-term plan to accommodate for alleged errors in the current price cap plan. See Second Report and Order, Policy and Rules Concerning Rates for Dominant Carriers, CC Docket 87-313, 5 FCC Rcd 6786, 6817 (“It would be inconsistent and inequitable to order retrospectively that LECs reduce their rates because the regulatory system was imperfect.”)

To effectively transition to this even more competitive environment, the productivity offset cannot be considered in isolation from other elements of the long-term price cap plan. In this regard, USTA recommends a combination of rate rebalancing, increased pricing flexibility, and explicit support mechanisms for universal service also be adopted. See generally USTA Comments, CC Docket No. 80-286 (October 10, 1995), at 3; USTA Comments, CC Docket Nos. 94-1, 93-124, and 93-197 (December 11, 1995). A sensible and proper addition to these regulatory changes would be, for price cap companies, to adopt a moving average X-factor which flows through productivity gains to consumers, and is based on a meaningful measure of productivity.

For example, MCI proposes to utilize the productivity offset to cut access rates to economic costs in the short-run. MCI Comments at 12 (“the X-factor must be explicitly designed to drive non-economic costs out of access charges”). Nowhere does MCI demonstrate (nor could it demonstrate) any support for the proposition that the goal of the productivity offset is to drive LEC rates for access and/or local services down so as to eliminate what MCI terms “uneconomic” costs. MCI’s proposal would serve MCI’s short-term business interests, but would seriously harm consumers. This drastic approach is intentionally narrow and simplistic. Moreover, MCI’s position that the productivity offset should regulate the relationship of costs to rates, rather than the movement of established rates, perpetuates the emphasis on rate of return concepts which incentive regulation was intended to eliminate.

Similarly, AT&T and Ad Hoc view the productivity offset as a mechanism to regulate earnings. AT&T’s proposal to increase the X-factor by over three and one half percentage points, and Ad Hoc’s proposal to raise the X-factor even higher, completely omit any thorough discussion of the outcome that would flow from such a drastic increase in the X-factor. These arguments assume that the public interest benefits of any regulation which “limit[s] appropriately the LECs’ earnings,” are self-evident. See Comments of Ad Hoc at 3. Thus, Ad Hoc’s arguments perpetuate the link between rates and LECs’ rate of return on investment,

in flat contradiction to the basis of incentive regulation. The Telecommunications Act of 1996 also suggests that price regulation based on earnings is disfavored. See, e.g., Section 706(a)(Commission and state commissions to encourage infrastructure deployment through, e.g., price cap regulation).

MCI, AT&T and Ad Hoc's proposals have one key element in common - they would completely eviscerate any and all profit incentives from the long-term price cap plan. Their proposals are tantamount to 100% sharing on all earnings above some "appropriate" level - MCI's proposal would effectively require LECs to share earnings at a level which may be found to be confiscatory. The Commission has long recognized that price cap regulation is in fact intended to create profit incentives for greater efficiency - they are the same profit incentives that exist in competitive markets. See Second Report and Order, 5 FCC Rcd at 6787. The Commission should reject out of hand proposals for the long-term price cap plan which eliminate the incentives in incentive regulation.

In a well-crafted price cap plan, rates are kept reasonable by establishing a capping mechanism that imputes onto the LEC's pricing ability the overriding economic factors that affect prices in a competitive market - - that is inflation and productivity. With the pricing restraints the LEC then has the incentive to achieve higher levels of earnings by achieving each year the maximum degree of economic efficiency, relative to the economy as a whole, which is possible given the LEC's individual circumstances. Limiting earnings to prescribed levels completely eliminates the efficiency incentives underlying a meaningful price cap plan.

If the adjustments, including the productivity offset, to LEC Price Indices (PCIs) are economically meaningful, then consumer safeguards against unjust or unreasonable rates are in place. There is no need for additional safeguards or further regulation of earnings. There is no need for the productivity offset to serve any purpose other than that for which it was intended. The simplified Christensen TFP method represents such a meaningful productivity offset: an accurate measure of LEC productivity, yielding an appropriate offsetting adjustment

to the increases warranted by inflation.

I. The Record Reflects that the Christensen Simplified TFP Method is the Superior Methodology for Calculating a Productivity Offset

As a preliminary matter, the record in this proceeding provides conclusive evidence that the Commission should adopt its tentative conclusion to base the productivity offset on a Total Factor Productivity (TFP) methodology. See, e.g., FNPRM, para. 25. The majority of the commenting parties advocate a TFP-based method; AT&T has, at least purportedly, abandoned its “historical revenue” method for one which it claims is a TFP method. Although criticizing the Christensen TFP method, neither AT&T and Ad Hoc base their recommendations on a method other than TFP.

Similarly, MCI’s objections to the TFP method appear to be directed entirely to the TFP studies “as currently developed,” not to TFP methods in general. MCI does not demonstrate any meaningful alternative to a TFP-based productivity offset - but merely recites a laundry list of objections to the USTA TFP studies. Thus, the Commission should adopt its tentative conclusion to base the productivity offset for the long-term price cap plan on the TFP methodology. The only issues remaining for consideration are those related to the appropriate method of developing a TFP-based productivity offset (or to other aspects of the long-term price cap plan).

A. The Simplified TFP Method Submitted in USTA’s Comments Addresses Many of the Objections Raised in the Initial Comment Round

1.) The Simplified Christensen Study Relies Entirely on Publicly Available, Verifiable Data

Christensen Associates has prepared a detailed response to the criticisms of the simplified Christensen methodology submitted as Attachment A to USTA’s Comments. Christensen’s response, (hereafter “Christensen Reply”), is included as Attachment A to these Reply Comments. Understandably, the initial commenters’ criticism of the Christensen

method is directed to the 1993 update methodology submitted by Christensen in an earlier phase of this proceeding. While that methodology remains sound, the simplified Christensen method submitted by USTA in this proceeding moots many of the issues raised by the initial commenters. Particularly, the simplified method, while also producing meaningful results, relies entirely on publicly available data. A number of parties' criticisms are thus mooted ab initio by Christensen's simplified method. See, e.g., Comments of AT&T at 9, ETI Report at 11, MCI at 10, Comments of Telecommunications Resellers Assn. (TRA), at 4, Comments of Cincinnati Bell at 4-5 (objecting to the Christensen method's use of proprietary data).

2.) The Simplified Christensen Study Is Administratively Simple

The FNPRM noted that a productivity offset should be reasonably simple, as well as relying on accessible and verifiable data. FNPRM, para. 16. The simplified Christensen TFP, as explained in USTA's initial comments, relies entirely on easily accessible data from public sources. MCI is incorrect to suggest that calculation of TFP via the Christensen method is administratively complex, or that TFP studies are unlikely to be a straight-forward process. MCI at 15-16. The simplified Christensen proposal for a rolling average TFP will be less complex, and less controversial than a periodic review of the productivity factor, as proposed by MCI. MCI at 16. Moreover, as demonstrated by the TFP Review Plan submitted by USTA, the Commission will not have to make individualized judgments, or allow input by interested parties, to establish the data elements included in the TFP studies. The input categories are defined by the TFP Review Plan, as are the sources of that data (primarily the ARMIS 43-02 report).

The simplified TFP approach, as detailed in USTA's comments and further expanded upon in these replies, places the methods for calculating TFP in a simple format, as displayed in the 19-page TFP Review Plan. See Attachment B to USTA's Comments. With the simplified Christensen TFP method, all data is historical and available on the public record. The documentation of the results is self-contained in the TFP Review Plan. On an ongoing

basis, use of the TFP Review Plan will cause significantly less of an administrative burden to review than the processes required under rate of return regulation.

Under rate of return regulation, all rate making was done on a forecasted basis. This forecasting method required that many years of extremely detailed data be placed on the record, including data for cost of service and demand elements. Volumes of data displaying detailed Part 36 and Part 69 outputs were required. It was not unusual for telephone companies to submit 10-15 large binders containing the data required to substantiate the forecasted rates which would produce the desired rate of return.

These substantial differences in the magnitude of data required are consistent with the differing goals of the two methods. With rate of return, the intent was to forecast rates which would yield a particular rate of return - with a TFP-based rolling average price cap method, the data is intended to provide evidence of productivity gains to be flowed through to end users. MCI presents no evidence or sound arguments to support its position that calculation of productivity is likely to be excessively burdensome.

3. The Revised Christensen Method Includes Both Debt and Equity Components in Its Measurement of the Cost of Capital

A number of commenters criticized the original Christensen method's use of the Moody's bond yield in calculating the cost of capital, because that measure did not include both debt and equity components. See, e.g., AT&T Comments, Appendix A at 45-47, Ad Hoc Comments, ETI Study at 20. As explained in the attached Christensen Reply, the simplified Christensen model uses the cost of capital for the U.S. economy, produced by the U.S. Bureau of Economic Analysis. This measure includes both debt and equity components, thus mooting this objection to the Christensen TFP approach advocated by USTA. See Christensen Reply, at 13.

B. The Commission Should Not Incorporate Adjustments to Input or Output Measures Which Are Not Economically Meaningful

1. The Commission Should Not Incorporate or Add To the Productivity Offset an Input Price Adjustment

The FNPRM describes the concept of an input price differential as “the difference between input price changes for the economy as a whole and the LEC industry.” FNPRM, para. 54. The FNPRM also notes that direct measurement of this differential, as performed by Bush and Uretsky, yields a differential of 2.2% for the period 1985-92. FNPRM, para. 54; see First Report and Order, LEC Price Cap Performance Review, CC Docket 94-1, released April 7, 1995 (“Price Cap Review Order”), para. 160-61, and Appendix F. The Commission tentatively concluded that this figure should be added to the X-factor, but also found that the record was not sufficiently developed to adopt a specific method for incorporating an input price differential. The FNPRM therefore seeks comment on the most reasonable way to account for changes in LECs’ input prices, and on the analysis presented in Appendix F.

The initial comments in response to the FNPRM continue to reflect a fundamental disagreement between LECs and their competitors as to the proper question to be asked, and consequently reflect differing notions as to the economically meaningful answer. As noted in USTA’s initial comments, the proper question to ask for the long-term price cap plan is whether or not there is any measurable inherent and permanent difference between the rate of growth of LEC input prices and the rate of growth for the same set of prices as measured for the U.S. economy as a whole, such that this difference should be reflected in the total productivity offset. See, e.g., USTA Comments at 27.³

³Note carefully that this is not the same question as asking whether, for a selected time period, measurement of a TFP differential should take into account differences in input price growth rates. Obviously, a meaningful LEC TFP differential will reflect differences in the elements of a TFP measure, as between the price cap LECs and the economy as a whole. In fact, as discussed below, both AT&T and Ad Hoc suggest that their input price differential should be added to TFP to obtain the overall productivity offset. But their calculation of TFP fails to acknowledge that such addition is only meaningful if the TFP result is first adjusted to account

The comments advocating an input price adjustment avoid answering this question, and instead take two main positions: 1) use of a long-term analysis of input price changes understates the effect of post-divestiture changes and is inconsistent with a short-term analysis of productivity (Ad Hoc Comments, ETI Study at 43; or 2) measurement of the differential between a short-term measurement of LEC input prices and the national economy yields a differential which should be included in the long-term price cap plan. See, e.g., AT&T Comments, Appendix A at 17-21. Neither of these approaches contests the point that there is no economically meaningful long-term difference in price movements between LEC and US input prices. See, e.g., AT&T Comments, Appendix A at 8; Ad Hoc Comments, ETI Study at 43 (advocating short-term input price differential measurement). Thus, no party presents any evidence of an inherent input price differential to support a separate adjustment to the productivity offset.

The input price differentials calculated on a short-term basis are flawed for other reasons as well. For example, the input price indexes used by AT&T and ETI in developing their TFP calculations were developed through different methods than the U.S. economy indexes to which they are compared. Obviously, comparison of input price indexes which are developed through inconsistent methods will not yield meaningful results. Ad Hoc's consultant also uses inconsistent data sets as between their TFP result and their measured input price differential. For these reasons alone, the input price adjustments advocated by AT&T and ETI are not economically meaningful. Accordingly, the Commission should reverse its tentative conclusion to include an input price adjustment. See FNPRM, para. 54.

a) The long-term trend of the input price differential is zero.

The FNPRM requests comment on whether the long-term trend of the input price differential is zero. FNPRM, para. 57. The record demonstrates that a direct measurement of

for the changes to input price growth.

the long-term trend yields a result of zero. See, e.g., Comments of GTE at 11; Comments of Ameritech at 5; Comments of Southwestern Bell at 11-12; see also AT&T Comments, Appendix A at 8 (Table 1 showing the average annual change for the period 1949-92 as 0.05%, and the average annual change for the period 1949-84 as -0.43%). Additional evidence for this conclusion is provided by a recent decision of the California Public Utilities Commission, who concluded that “there is no basis to conclude that the input price differential is different from zero.” See Public Utilities Commission of California, Interim Opinion, Decision 95-12-052 (December 20, 1995), at 67-68; Christensen Reply at 24-25.

Ad Hoc’s consultant argues that there is no valid rationale for Christensen’s use of post-divestiture input price data series in calculating TFP, but a long-term input price series for calculating the input price differential. Ad Hoc Comments, ETI Study at 43. But Ad Hoc’s objection proves nothing - it does not address the question of whether the long-term trend is zero. In fact, as shown in the Christensen Reply, examination of post-divestiture input price data supports the conclusion that there is no meaningful or inherent difference between LEC input prices and input prices for the economy as a whole. See Christensen Reply at 27 (Noting that the average over the 1989-1994 period in fact becomes positive); NERA Reply at 14 (noting that the input price differential reversed itself in the 1990-92 period). Even if Christensen had utilized a short term data set, as advocated by Ad Hoc, the evidence indicates that the result would still be zero.

b.) Calculating a Meaningful Input Price Differential Requires the Use of Consistent Data Sets

In addition to ignoring the long-term trend of input price differences between LECs and the economy as a whole, neither AT&T or Ad Hoc has placed on the record a meaningful methodology for calculating an input price differential. Again, the FNPRM describes the concept of an input price differential as “the difference between input price changes for the economy as a whole and the LEC industry.” FNPRM, para. 54. In order to derive a meaningful measure of this differential, the methods used to calculate the input price index for

the economy as a whole and the input price index for the LEC industry must be consistent. Comparison of indexes derived in different ways, using differing data sets, will not yield economically meaningful results. Yet this is precisely the flaw of the Bush-Uretsky analysis' use of Christensen's LEC input price data,⁴ and it is a mistake continued by the AT&T and ETI methods.

For example, AT&T's consultant Dr. Norsworthy calculates an input price differential for the post-divestiture period (1985-1994) of 2.54 percent, by determining the LEC-specific input prices for labor, material, and capital, and comparing them to the U.S. economy figures for that period. AT&T Comments at 12. Norsworthy's LEC input price indexes incorporate a number of modifications, e.g., a self-proclaimed "hedonic" adjustment to the capital input price element of the aggregate input price index. AT&T Comments, Appendix A at 20. Yet, these same adjustments are not made to the U.S. economy input price index to which the LEC index is compared. See Id., at 21, Table 5. Accordingly, AT&T's conclusion that "input prices at the LECs, when estimated using publicly available data with hedonic adjustment for changes in capital quality, increase much more slowly than do input prices for the non-farm business sector of the national economy," Id., at 21 (emphasis added), is not helpful.

AT&T fails to answer the economically relevant question: whether LEC input prices, calculated using the same methods as the input prices for the non-farm business sector of the national economy, increase more slowly than do the same prices for the national economy. The distortions resulting from the comparison of inconsistent data sets do not form the basis

⁴The Bush-Uretsky analysis measured the differential between the LECs and national economy indirectly, using the input price index developed by Christensen to measure TFP. See Price Cap Performance Review Order, Appendix F; AT&T Comments, Appendix A at 17. As discussed in USTA's initial comments, the Christensen data used by Bush-Uretsky to measure the input price differential were not collected for that purpose and are unsuited for that use in several respects, e.g. the U.S. input price series was calculated using a different treatment of capital prices from the LEC input price series. Hence, measured differences in LEC and U.S. input price growth rates are at least partly due to differences in measurement methods. USTA Comments, Attachment A, at 42-46; Attachment B at 9.

for an economically meaningful input price adjustment. See also Christensen Reply at 22 (discussing ETI's errors in calculating an input price differential). Accordingly, no input price adjustment should be included in the long-term price cap plan.

2) Calculating TFP on An Interstate-Only Basis Would Yield Incorrect Results and Is Not Legally Required

a) A Meaningful Productivity Offset Cannot Be Calculated on an Interstate-Only Basis

The FNPRM notes that the Commission has found that interstate and intrastate services are largely provided over common facilities, and that the record contained no evidence that there was an economically meaningful way to divide and measure the costs of facilities used for the provision of interstate service from costs of facilities used for provision of intrastate services. The Commission therefore tentatively concluded that TFP should be calculated on a total company basis. FNPRM, para. 63. The initial comments demonstrate that the Commission was correct.

Some commenting parties advocate an interstate-only TFP measure which they claim is economically meaningful. See, e.g., Comments of AT&T, Appendix A, at 23-29, 72-77; Comments of Ad Hoc at 5, ETI Study, at 50. Other commenting parties appear to concede that there is no meaningful way to measure interstate-only TFP. Comments of MCI at 8; Comments of TRA at 5. These commenters argue that since the price cap plan regulates interstate rates, it must adjust the rate caps for increases in interstate productivity only (or demonstrate that total company productivity meaningfully reflects LEC productivity for interstate services alone). See, e.g., Comments of TRA at 5.

As discussed further in the Christensen Reply, no party has demonstrated a meaningful method for calculating an interstate-only productivity factor. The difficulty faced in doing so is highlighted by the illogical leaps in reasoning which some parties make to construct an interstate-only productivity factor. AT&T's consultant, Dr. Norsworthy, claims that AT&T's

Performance-Based Model can develop an interstate-only TFP factor by using three measures of output associated with interstate revenues to form a single index, using the Fisher Ideal Quantity Index method. AT&T Comments, Appendix a at 24. Having measured interstate output growth, Dr. Norsworthy then makes a quantum leap, and without supporting explanation, purports to arrive at an interstate TFP growth result by assuming that input growth for interstate services is the same as input growth for all other regulated services provided by the LECs. AT&T Comments, Appendix A at 27. Ad Hoc's interstate-only TFP suffers from the same error. Ad Hoc's consultant, Dr. Lee Selwyn, states that "input growth in the interstate jurisdiction can be approximated by total input growth." Comments of Ad Hoc, ETI Study at 50.⁵

Two conclusions can be drawn from this observation: 1) the Commission was correct that no meaningful interstate-only input growth index can be determined; 2) because they are based on unsubstantiated assumptions that total company TFP provides a meaningful proxy for interstate TFP the Commission should reject the AT&T and ETI studies. Cf. Comments of MCI at 8 (stating that the Commission may not simply use total company TFP as a proxy for interstate TFP). As explained in the attached Christensen reply, one can only "identify" inputs for interstate and intrastate services (which share common costs), if the common costs are allocated in some way. See Christensen Reply at 4-6. Any such allocation, however, will be arbitrary and not yield economically meaningful results. The best and most meaningful method is to measure TFP directly on a total-company basis, as Christensen does.

As the Commission noted in the FNPRM, the Commission's separations rules may not be optimal benchmarks for setting interstate rates. FNPRM, para. 63. The Commission's

⁵Some commenters make guesses as to which inputs are important to measuring interstate-only input growth, noting that "it may be" that interstate access services rely more intensely on inputs, MCI at 8; or that LECs interstate access services rely more on fixed inputs than on labor and materials inputs, Ad Hoc Comments, ETI at 27. However, neither MCI or ETI attempts to measure the extent to which this is so nor provide any other evidence to prove this hypothesis.

hesitancy is well-placed. The use of arbitrary jurisdictional separations rules to calculate interstate-only input is certain to yield results which are not economically meaningful. As the Commission is well aware, a portion of the non-traffic sensitive costs used to provide both intrastate and interstate services is expressly allocated to the interstate jurisdiction to further particular public policy goals. See, e.g. Rural Telephone Coalition v. FCC, 838 F.2d 1307, 1314 (1988). In some cases, separations decisions are not based on economic considerations at all, but are guided by public policy goals of just and reasonable rates, and universal service. As the D.C. Circuit noted, “there is no purely economic method of allocation . . . elements of fairness and other noneconomic values inevitably enter the analysis of the choice to be made.” MCI Telecommunications Corp. v. FCC, 675 F.2d 408, 416 (D.C. Cir. 1982). Because discussions of LEC “interstate productivity” measures are economically meaningless, the Commission should not rely on separated costs to develop a productivity offset. The simplified Christensen TFP method avoids these arbitrary allocation questions, and relies on total productivity to derive a meaningful productivity offset.

b) An Interstate-Only Productivity Offset Is Not Legally Required

The Commission need not be concerned that its use of total company productivity data to develop the productivity offset somehow exceeds its jurisdictional reach. See FNPRM, para. 63. Commenting parties continue to rely on the Supreme Court’s decision in Smith v. Illinois Bell, 282 U.S. 133 (1930), for the proposition that the Commission cannot adopt a productivity offset based on total company productivity. See, e.g., Comments of Ad Hoc at 6. These parties continue to misstate the holding of Smith, and misapply it to this proceeding, in order to twist a fundamental rule of jurisdictional limitation on rate regulation into a limitation on the data available to a regulatory body in the permissible exercise of its functions.

Smith concerned action by the State of Illinois which was found to violate the Commerce Clause of the U.S. Constitution because the Illinois Commission (and the District Court affirming the Commission’s decision) had set rates based on the total Chicago property

of Illinois Bell, without regard to distinctions between the intrastate and the interstate property and business of the Company. The Illinois Commission did so because an intrastate-only calculation would have deducted the value of property used by the long-distance company ("the American company") not properly reimbursed to Illinois Bell - thus, the district court and the Illinois Commission were forced to pass on the validity of the division of interstate tolls - a matter subject to federal regulatory jurisdiction. See 282 U.S. at 147.

The Illinois Commission's examination of the division of interstate toll in the pre-divestiture world is analagous to a hypothetical state commission examination of federal access charges, including the issue of whether or not those access charges include the desired contribution to local rates. The essential holding of Smith is that the separation of intrastate costs, revenues, and expenses is essential to prevent the state commission from intruding on areas subject to federal jurisdiction. For example, Smith would prohibit a state commission's examination of whether interstate access charges provide an appropriate contribution to maintain affordable local rates. Cf. Rural Telephone Coalition v. FCC., 838 F.2d 1307 (1988)(upholding the Federal Communications Commission's use of its power to allocate 25% of non-traffic sensitive costs to the interstate jurisdiction); see also MCI Telecommunications Corporation v. FCC, 750 F.2d 135, 141 (D.C. Cir. 1984)("Smith appears to be based on the limits of state jurisdiction, rather than on constraints imposed on federal agencies").

In the instant case, where a federal regulatory body seeks to adjust a cap on interstate rates by a measure of total company productivity, the Commission would not be examining matters outside its jurisdiction, because any relation to intrastate rates is not considered in calculating the productivity offset (or any other element of the price cap plan). The Commission can set access rates based on jurisdictionally separated costs - the initial PCIs were set in exactly this manner. See Second Report and Order, 5 FCC Rcd at 6814. But the Commission need not adjust those rates based on interstate-only productivity measures any more than it must apply interstate-only measures of inflation. By Ad Hoc and AT&T's reading of Smith, neither the FCC nor a state Commission could utilize GNP-PI (or GDP-PI),

nationwide measures of the cost of capital, or any other economy-wide figures in adjusting price cap indexes for local rates. By Ad Hoc and AT&T's reading, regulators must instead develop measures of inflation based on jurisdictionally separated costs.⁶ This absurd result was never contemplated by Smith.

C. The Simplified Christensen TFP Methodology Properly Calculates the Elements of TFP

1) The Simplified Christensen Study Properly Utilizes An Economic Rate of Depreciation

MCI submitted with its comments a study prepared by Baseman and Van Gieson which, MCI claims, demonstrates that the Commission's current depreciation rates adequately reflect the economic life of telephone company assets. See Baseman and Gieson, "Depreciation Policy in the Telecommunications Industry: Implications for Cost Recovery by the Local Exchange Carriers," December 1995, attached to MCI Comments ("MiCRA Study"). As discussed in the attached paper by Technology Futures, Inc. ("TFI Study"), the MiCRA Study makes a number of incorrect assumptions and relies on circular reasoning. Additionally, the MiCRA Study ignores the fact that price cap LECs have determined that the use of regulated depreciation rates, under the criteria prescribed by FASB 71, is no longer appropriate. As a consequence of the excessively long depreciation rates prescribed by the Commission, LECs took a total charge of approximately \$40 billion dollars to bring their depreciation reserves in line with the facts of a competitive marketplace, and coincident with the conversion to price cap regulation.

MCI's support of regulated depreciation lives can perhaps more likely be explained by the following analysis. One of the primary assumptions of FASB 71 and the continued use of long depreciation lives set by regulators is that past costs could be included in future prices

⁶In fact, by this reading, the Commission's use of GNP-PI for AT&T's own price cap plan would be unlawful.